

Established 1848.

Sorgo Department.

National Sugar Growers' Association.

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Condition of Cane Crop.

HOLT COUNTY, MO. July 25th. No name. I planted my Early Amber the first week in May. I have a good stand, now 9 to 10 feet high, seed heads coming out all over the field. We have a good prospect at this writing of a good cane and corn crop in Northwestern Missouri. Success to the RURAL WORLD.

SALINE COUNTY, MO. July 22nd. T. J. E. I have 18 to 20 acres in cane. Planted first May 22nd Early Amber (rain stopped planting). On the 24th planted Orange, 27th Liberator and Link's Hybrid. Planted with Keystone Planter, about 45 inches high, Liberator 38 and Link's about 30 without in either case raising the blades to their full height, all looking well. Planted the rows double, that is run the planter between each row and marked 36 inches the other way.

OSWEGO COUNTY, N. Y. July 22nd. W. J. B. I have six acres of cane looking fairly. That planted May 13th was on the 12th July about 16 inches high. Three acres planted May 25th about six inches. Besides this there are about five acres being raised in this vicinity, and would have been twenty had the seed been good.

CLOUD COUNTY, KAS. July 21st. E. M. C. My cane on July 12th may be reported as follows: Ten acres Early Amber planted May 10th, is 40 inches high, ten acres Early Orange, planted May 15th, 30 inches, a good stand throughout. Double the amount planted this year over last. Success to the RURAL WORLD.

BUTLER COUNTY, OHIO. July 22nd. F. M. R. Cane is backward here this season. Spring cold and wet, hence had to plant over. July 12th, cane 18 inches high. It is suffering now from drought. Other crops fair. No fruit.

MORGAN COUNTY, OHIO. July 18th. S. W. M. My cane is a good stand and was well prepared before planting, and thoroughly worked afterwards. Planted May 14th in checks 3-1-2x3-1-2, and measured July 18th, 4 to 7 feet, or an average of 5-1-2 feet. Saw the first heads to-day. Variety, Early Amber.

STEPHENSON COUNTY, ILLS. July 21st. L. O. M. My cane is a good stand in Amber Cane on land which has been in part heavily manured with cane manure. Ground cold and wet, rained some whilst planting, and only about two-thirds of the seed germinated. May 25th plowed and harrowed, and planted the following day. This planting came up soon, and made an extra good stand. On the 12th of July, some 2-1-2 acres stood about 15 inches high, the remainder 6 to 8 inches, the latter apparently on the best part of the soil, and is quite under size to-day. It seems to be sick, but I do not know what the trouble is. I have a plot of about 3-4 of an acre, stiff clay soil, planted May 2nd, that stands now 5 feet. We have had good growing weather thus far, but no warm nights; expect them soon, however, as all the signs favor a dry spell.

LAFAYETTE, IND. E. W. D. July 12th. Cane not quite so forward as last season, due to a three weeks' drought in June, averages from four feet to four inches in height, the former planted May 5th, latter, July 10th. No cane in this vicinity better than our 200 acres. Will commence grinding about September 1st.

NEMHA COUNTY, KAS. July 19th. A. J. A. My cane is looking well, that planted May 15th is four feet high, that planted June 5th is two feet. Our roasting process is a success, the sirup standing in the sun in glass jars does not ferment, and our people hereabouts want none other.

MORRISTOWN, MINN. July 18th. S. H. K. The Early Amber cane promises the best crop for years. Its average height July 12th, was 25 inches, and has grown nine inches since. I have, of my own planting, 35 acres. There is a great deal planted in this State, and it all looks well. Three weeks ahead of last year.

EDWARDSVILLE, ILLS. July 19th. C. M. Schwarz. The prospect for cane here this season is very good. The Early Amber planted first week of May, measured on the 12th inst., seven to eight feet, and heading out. Early Orange planted about same time, is now between 3 and 4 feet, the latest planted about June 1st, is about a foot. I never saw a better stand. The weather here has been, so far, very favorable for both cane and corn.

MONROE CO., WIS. July 19th. C. F. E. Our cane was planted May 17th, the ground was in good order, but we had a frost on the 29th, and the mercury went down to 30°, and it is now only twelve inches high. The weather has been cold, and if we do not have warmer nights our cane will not mature. Some of mine is planted between rows of corn. The corn of the North on one side, which is poor and about twelve inches high, and White Dent on the other side, which is about four feet high, the cane in the middle being from four to twelve inches. I have used on some the Super Phosphate Fertilizer sold by Mr. Mayer of St.

Louis. Oats, wheat and corn look well. Day is light. Cool nights and dry weather.

JOHNSON CO., TEXAS. July 24th. No name. Our corn planted April 1st looks well and is from 5 to 6 feet high. We need rain badly, and unless it comes soon will do us very little good. Not much sorghum planted here. I have 10 acres, six of Early Orange and four of another kind. Am glad to see the sorghum men talking about their business.

BLACK HAWK CO., IOWA. July 20th. C. B. B. Our cane on the 12th July was the best we have had for four years and was in different fields from three to six feet high, some of it beginning to show heads. We will have about 300 acres to work, all Early Amber. Oats a good crop and corn the best in four years. Grass is also good and first rate weather in which to save it.

FANNIN COUNTY, TEXAS. July 26th. T. A. I. I planted three acres Orange Cane 30th, and the best is now waist high. In spite of extreme drought now prevailing. The spring was however excessively cool and wet hence our people planted only half a crop.

HAND COUNTY, DAKOTA. July 15th. R. K. P. Our cane averaged on the 12th inst. 30 to 36 inches high and growing very fast. More planted than last year, nearly all of the Early Amber variety with a little white Amber. Our rains, however, have been nearly all of a local character this summer and in some sections crops have suffered from drought, especially wheat and oats. Showers have, however, been more frequent within the past ten days.

ST. PAUL, MINN. July 17th. S. A. T. M. Early Amber cane planted very promising, stands waist high, and is of a good color. Planted May 17th in 3-1-2 foot check rows, worked and laid aside with horse cultivator. Soil, sandy Burr Oak prairie six years in cultivation.

SEWARD COUNTY, NEB. July 17th. J. G. I. I planted eight acres of the Honey Cane on May 23rd it was 30 inches high on the 12th July and looking well. My mill did not do well last year, and now I have a new one which will I hope do better. Have re-built my furnace on the Wyman plan, and hope to utilize the bagasse. I would like to get right so as to burn straight from the mill.

DICKINSON COUNTY, KAS. July 17th. H. M. Early Amber cane planted May 5th, was five feet high on the 12th July. RURAL WORLD comes regularly and is carefully read, but the sulphur war suggests a little war between Root and Anderson. Shut them up, and let some of the best way of selling sirup whole sale or retail.

From the Empire State.

EDITOR RURAL WORLD: Your call for information as to growing cane was noticed, but as my paper did not arrive till after the 12th inst., I could not report exactly at that date. Since then I have examined my field and find it looking well. It stands now, July 15th, about three feet high. It is of good color and is growing nicely. I wonder if Prof. Wiley's isothermal line, lately discovered in Europe and stretches over on to this continent, has anything to do with the present growing crop? I see he places New York in the maple sugar belt. What does he mean by that? Does he mean that sirup from cane grown in this belt will have the flavor of maple sugar? This is probably in accordance with instructions from the great agricultural commissioner of Washington, D. C., from W. H. C. Salem, Mass. He wishes his chemist to "experiment as a discoverer and not as an advocate."

So intent has he been to carry out instructions, that he has discovered something that does not exist. Long before the chemist was called Messrs. Kenney & Miller up in the maple sugar belt in the vigorous climate of Minnesota, made sirup and sugar from Amber cane in paying quantities. And the Prof. has discovered that this cannot be done. I leave this to our fighting brother.

But seriously, I have been said that "Peace hath its victories no less than war." This is one of them. Corn was a product of the warm climates. But civilization has carried it near to the frozen zone. Cane is rapidly following in its train. The power of plants to adapt themselves to different climates and soils is truly wonderful. The genius of man to aid in this adaptation is also wonderful. Let none be discouraged or elated by any isothermal lines, but push on, whoever they are. The great wealth of fame is already woven for the brow of the victors.

A. W. WILLIAMS.
Oneida Co., N. Y., July 21st.

EDITOR RURAL WORLD: Most of the cane here was planted the first week in June about thirty acres in on the island, looking well now. Some planted late, and on rather hard soil, is small; the most is about 2 feet high and a healthy green. All is the Early Amber variety, but a little Kansas Red and Early Orange. I sold my old mill and pan to a neighbor, so we have 3 mills on the island, one horse, two horses, and mine a four horse mill. I want a new pan.

There is quite a boom in the sorghum business in this neighborhood, as a large number would have planted this spring if they could have had got seed. The heavy rain we had the latter part of May made us all a little late in planting; those who planted early lost all their seed through cold and wet.

Please tell in the RURAL WORLD, which is best in the long run, galvanized iron or charcoal iron, for an evaporator of 50 or 75 gallons a day.
PELEE.
Pelee Island, Lake Erie.

Day's Rejoinder to Field.

ON THE ROAD, JULY, 1884—MESSRS. J. A. FIELD & CO.: I accidentally learned of your strictures upon me in your advertising sheet, while putting in a set of sugar machinery with one of your subscribers in Illinois. As you have told your tale to an audience, which has not heard mine, I trust you will not adopt Clement's illiberal suggestion—give me a blast in it and close it to my reply.

You evade the point in issue, which is the correctness of my percentage table, and try to belaud it with side issues. In fact you virtually surrender upon that point by saying "The misrepresentation of cane mills does not come in the per cent. of juice so much as it does in Mr. Day's conduct."

If my figures are correct, what has my conduct to do with the subject? I therefore dismiss the card as vindicated, you having been unable to show a single statement incorrect.

Just to please you, now will review my "conduct." Before doing this it may be satisfactory to my friend Mayberry to know that we are putting in a No. 3 Cuba for Weber & Scovell, at Sterling, as well as four other sets of double mills, to be run under their auspices, receiving, besides, an order for a car load of smaller mills, for farmers' auxiliaries. But we are not putting in a mill at Ottawa. After the publication of my note, Mr. Scovell wrote me he had declined to consider the Ottawa matter, for want of time, our works being crowded. As to

CLEMENT AND THE 36-INCH STAIR. I had seen its name at Ottawa, and noted a philosophical defect that would ensure a break with the mill over half full.

I had desired your injury, I would have said nothing, and let your mills break. But the world is large enough for both of us, and I did desire the success of Dr. Wilhelm and W. P. Clement. Not wishing to appear as if meddling in your business, both promised not to give me away if I pointed out the trouble. So far as I know the Doctor has kept his promise.

I pointed out the defect, and prescribed a probable remedy.

Well, both mills broke promptly on time, just as I said they would, and for the reasons I gave.

Did I "misrepresent" them then or not? I did suggest to Clement that he could set up a Madison mill if he got into trouble, and he did it. If he has carried two faces, and violated his pledge of honor, when I was trying to do him a service, it hurts him not me.

By the way, your article reads as if your mill had done all Clement's work, when it did not run over about 3-1-2 tons per hour. You don't tell us what the Madison did.

CLEMENT'S PERCENTAGE. Clement says he did not make any experiments to ascertain the per cent. of juice his mill expressed, but "thought he got an average of 40 per cent." He neither said "thought," nor mentioned "per cent.," but with the aid of a saw, he had concluded a series of elaborate experiments, announced "800 pounds of juice from a ton of cane;" and Professor Scovell sitting by, said, "just 40 per cent."

For "stage effect," he made that peculiarly worded and precise announcement, when he had made no experiments, what reliance can be placed upon any of his statements? How do we know he got anything like 800 pounds of juice? The probabilities are that he did not, as Prof. Scovell, with 1,500 acres in the same locality, and a much more powerful mill, realized "less than 37 per cent."

CLEMENT AND DEMING. You claim that Clement, making 11-1-2 gallons per ton, did better than Deming, who made but 8-1-2 gallons. As you had Deming's address before you, why did you not give the facts? Deming he made but 8-1-2 gallons per acre or 140 acres, "when he had before, Prof. Wiley (same mill) "averaged 201 gallons to the acre, on 54 acres," and adds, "This discrepancy is not due to the decreased tonnage, but is the direct result of early frost," (Sept. 8th) cutting the leaves and thereby checking the growth of all but 20 acres, planted to Early Amber, "..." thereby reducing its saccharine strength."

Talk about my quoting Clement and Deming as "the devil quotes scripture!" I gave all the facts bearing upon my point (supposing Clement's quotation to be a fact) while you split a fact and use only what suits you! If Deming, with that miserable, unripe, frost-bitten cane, expressed "64 per cent.," what would he have done with Clement's rich cane? He might have reached Wiley's 75 per cent on one variety the year before; he certainly would have made 64 per cent and run Clement's total of 46,000 gallons up to 75,000 gallons.

It does seem as if you loved to give me clubs to beat you with. See how plain a tale disposes of Hawkins forever. You say "Day hears that Hawkins, one of his former agents, has bought a Star, and at once goes to Ottawa," and (to shorten up) to Hawkins a 24-inch mill won't work up 400 acres of cane; (pitch into Field); says many dishonorable things; calls Hawkins a liar, and Hawkins proposes to sue Day for slander.

I had modified one of Mr. Scovell's large evaporators to conform with my new patent and shipped it to Ottawa. Going down to see it, our agents Reid and Holliday, the only agents I ever made there, told me of the Pomona matters, and I said the mill was not large enough, and they must increase their mill capacity or lose half their cane. I had never seen or heard of Hawkins before. One of the Pomona Company, Mr. Whetstone, in 1879 bought our No. 4 Pearl, but sold it last season, to join the Pomona Company, he raising the cane

on his own land and Hawkins to look after the mill and manage the business. Reid and Holliday being great friends of Whetstone were anxious the Company should know my opinion, and to make a long story short, Hawkins, who lived in Ottawa, was telephoned for, and on his arrival came to their store. As soon as we were introduced, and before I could say anything, he began—

"I wrote to your house about a mill, an couldn't get any satisfaction. The fact is, your house isn't an honorable house. You don't do business in an honorable way!"

I was astounded and demanded an explanation.

Why, Whetstone sent to you for repairs to his mill, and you sent 'em, but didn't send the bill until after you got a testimonial out of him, and then along came the bill!"

I looked the matter up, and found that Whetstone had ordered repairs to his mill for sale. They arrived a few weeks before, and the bill had just come. On turning to the excellent testimonial of J. H. Whetstone, Pomona, Kan., I found it dated February 1st, 1880, more than three and a half years hence!

This stumped Hawkins, and not having the sense to acknowledge his mistake, he spluttered and raved. It is the man caught in a lie who gets mad. I sent him a note elucidating the matter, and he replied to me at Lawrence, and in his letter which I preserve as a curiosity, he justified himself saying—

"It is our privilege to lie when we think it to our advantage."

My reply "summed him up!"

But the worst feature in the case, Mr. Field, is, that I sat down and wrote you all about this matter at the time, quoting Hawkins' business motto to you, and enclosing my reply to him. With a knowledge of the facts then, how could you impose upon your readers and seek my injury, by introducing him as a credible witness?

I will waste no more time on Hawkins, and hereafter, when your readers see a statement from him, they will be sure to see the words "Hawkins says," and will be magnified exceedingly. Behold! are not these letters spread out on the records of the RURAL WORLD? Now, as these mighty champions contended with valor and the people were instructed immediately, I was in the spirit and I was in the land of the Iowans. Now this is the vision which I saw, which is

THE VISION OF AGRICULTURE, THE HITITE. I looked, and behold! there came forth from the vision a man, and he was exceedingly short and slender, so that they were bent as a bow that is drawn to shoot an arrow, by reason of the great weight of his body. He had a long, thin neck, and a long, thin body, and he was dressed in a long, thin coat, and he was wearing a long, thin hat, and he was carrying a long, thin stick, and he was walking in a long, thin line, and he was looking at the people with a long, thin eye, and he was saying, "I am the vision of agriculture, the hitite."

FINALLY. If I have the best mill it is not my duty to the public and manufacturer for me to show up its points? And if I prove it the most effective have you a right to oppose me? If I have a electric light of 2,000 candle power, and you with a tallo-pip accuse me of "misrepresentation" if I show my light to the world and say, "It is 2,000 candle power?"

Your complaints are as reasonable as a fat girl, horned-toad show railing at Barnum's grand aggregation posters.

Now, I am disposed to be magnanimous. If you want good mills, I will sell them to you at agent's best prices. But if you want to ruin your customers will be sure of the best going.

M. DAY, JR.
What New England is Doing.
EDITOR RURAL WORLD: It may be of interest to your readers who are interested in the sorghum industry to know what is going on down here on the soil and among the stones, where the footstep of the pilgrim first trod, and from which their sturdy successors have overrun a continent and made your vast western prairies blossom with the beauties of an agricultural wealth richer than all the splendors of the fabulous ages, of a fabulous history, and I will state for their benefit that the New England states have taken hold of this important question in the thorough systematic manner that characterizes them in all the business enterprises in which it is thought best to engage; for several years experiments by numerous intelligent gentlemen have been made in private, many of whom are leading spirits in the New England Agricultural Society, and the Massachusetts Society combined with the Massachusetts Society and the Mechanic association and together are growing the sorghum and putting in the most improved machinery that the mechanical skill of the country affords, the Agricultural Society offering prizes for the best cane grown; while the Mechanic association now offer a special gold medal to the competitor who succeeds in putting in the best machinery for extracting the juice and its manipulation through its various processes to the required condensed degree of a commercial product. I notice in your paper numerous advertisements of manufacturers, each of which are making the best machinery. George B. Boomer and myself are doing the same thing. We are going to put in a set of evaporators, and we hope to meet as many of your enterprising competitors as possible. We shall have a complete outfit of our new process, embracing cutter, steamer, press, defecator, filter, evaporator and cooler. Judge will be appointed, whose names I will send you when I learn them. Very respectfully,
O. F. BOOMER.

Mr. Andrew J. Adamson, Sabetha, Kan., writes, July 17th: I have a good field of cane three miles south of Sabetha, that is four feet high to-day. I will have both the sorghum and elder filter in operation. They will be on exhibition at the Charitable Mechanics Fair to be held here in Boston this fall, beginning Sept. 10th.

In the meantime, I can assure any who are interested, that the filter is all

Chronicles.

BY AGRICOLA, THE SCRIBE, WRITTEN IN THE DAYS OF THE MICHIGAN-GANDER DANIEL, WILLIAM THE HOOSIER, AND THE FLEND, A. D.

In the last year of the reign of Arthur (not of the "Table Round," when the memory of Merlin "The Great-Charter of the times" was cold in the hearts of the people, when the enraging steps of Vireion and the amours of Lancelot and Guinevere, lived only in song, there lived in the state of the Peninsula, even in the country of the Michigan-Ganders, one Daniel who was of the tribe of Sorghum. Now Daniel was a wise man and an Alchemist. He understood many of the secrets of nature, and manufactured a very subtle fluid the nature of which was to bleach. So it came to pass when the people of the tribe of Sorghum understood the properties of this fluid, how it could be used to increase the value of the products of their factories and to magnify exceedingly their incomes, their hearts were moved towards Daniel, and they communed one with another saying "Let us obtain from Daniel the means to make this wonderful fluid."

So the faces of all the tribe were turned towards Daniel. But it came to pass as he proceeded to make merchandise of his instruments, lo! there appeared even in the land of the Hoosiers another Alchemist, by the name of William.

Now, William was also of the tribe of Sorghum. He was a priest serving in the temple of his people, coming in and going out before all the congregation. So William lifted up his voice and taught the people saying "This fluid of Daniel's is a very simple thing and easy to make. All you need is an old jug and a sand bath." Now, when Daniel understood that William had been doing, he was mightily moved, and his wrath was great. So he wrote letters to the chief men of the tribe saying "This impious Hoosier is deceiving the people." But, William was valiant and contended with spirit. So he wrote letters to the chief men of the tribe till their correspondence was magnified exceedingly. Behold! are not these letters spread out on the records of the RURAL WORLD? Now, as these mighty champions contended with valor and the people were instructed immediately, I was in the spirit and I was in the land of the Iowans. Now this is the vision which I saw, which is

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that is claimed for it, and I can add to the claim that it is a boon to every sorghum or elder manufacturer who will adopt it.
O. F. BOOMER.
47 Brookline Av., Boston, Mass.

The Chronicles of the Scribe Agricola in the days of Daniel the Mich-Gander, William the Hoosier and of the Sorghum Lapping Flend, the Kansan, are commenced in this issue. Book the IInd has not yet reached us, but will in due time.

I would simply say to Messrs. Day and Root, desist, desist. I will come into the field another season with a process of extracting juice that will knock both their machines into a cocked hat.
Very respectfully,
O. F. BOOMER.
Boston, Mass.

Agricultural.

Paint for Protecting Roofs.

There are frequent inquiries about the use of coal paints for roofs, and all over the West, parties are patrolling the villages with their stink-pots of coal tar, and swabbing every roof they can gain access to. I have had twenty years' experience in the use of coal tar mixed with ground slate, iron-ore, mineral paints, and the so-called asbestos—all about alike—and I know what I am talking about. They are unfit to use on wood or tin. They will cause wood shingles to crack and curl, and tin to corrode. A gentleman of utmost reliability has just told me that two new shingle roofs were last fall covered with a preparation of coal tar, petroleum and ground slate, and they are ruined—the shingles have curled up, and the owners are preparing to new-roof the buildings.

To make a desirable cheap roof-paint, take 4 lbs. yellow ochre, 1 lb. venetian red, and add a little white lead and a very little lamp black, and mix two ingredients to improve the color simply, and mix with raw linseed oil. The lamp black should first be mixed or ground in a little oil so as to mix smoothly with the rest. This will make a durable paint, costing less than seven cents a gallon at the present price of oil, and can also be put on with a good white-wash brush, or a wide, flat brush costing about 75 or 85 cents.

However valuable coal tar may be for some uses, it is not fit to be used on shingles, or wood exposed to the sun and weather.—Chas. Betts, in Country Gentleman.

Water Filter.
Rural New Yorker suggests this cheap arrangement for securing a good supply of pure water:

Secure a first-class barrel or tub, and in one side, four inches from the bottom, bore a hole and fit a wooden faucet into it water-tight, letting the end project two or three inches inside. Fill this vessel a couple of inches with small stones or very coarse gravel; get a six-gallon stone crock and drill in one side, close to the top, a hole through it, into which is fitted a piece of lead pipe reaching into the crock. Put the iron into the barrel, bottom up, placing the hole in its side over the end of faucet, and fill up under and around it with coarse gravel until it is firmly fixed in the tub, and the gravel comes two inches above the inverted top. Now fill about the crock and several inches above, with hard-wood charcoal broken quite fine, say from the size of quails' eggs down, wetting it as put in and pounding down quite firmly with the end of a stick. The lead tube coming from the crock should pass on one side to the top and a little down on the outside of the vessel. On the charcoal in the latter, put a couple of inches of fine washed sand, and on this coarse gravel to within two inches of the top of barrel. The water should be put on top of the gravel; the filtered water can be drawn from the faucet. If well made, this will prove as good a filter as any that can be bought for \$15.

Agricultural Notes.
—Farmers who have materials and a few good edge-tools can often save money and much time by repairing their own common implements. A supply of perfectly dry, hard wood should be kept stored on every farm for such purposes. Then with drawing-bench or a work-bench, fitted with vise and claw, drawing-knife, chisels, augers and bits, planes, saw and hatchet, hardly a week would pass but they would come to use to some advantage. Handles of tools, wagon tongues, etc., can be bought ready-made, but they will need fitting afterwards.

—Let me say about clover pastures, never turn in when it is wet. Always give a full feed of corn or other dry food immediately before turning in. When once in, let them remain there only for a short time, as for milking, when they should be immediately returned, and salt every day. If these precautions are taken the danger of bloat will be very small. If bloat occurs, give salt freely, a handful at a time, or a solution of chloride of lime. Chlorine having a powerful attraction for hydrogen, will soon reduce the distension by converting the gas into a fluid. In urgent cases, use the trocar. One should be kept by all who pasture on clover. The idea is that the animal should not be allowed to get hungry enough to gorge itself.

Why do not farmers experiment more largely with spring wheat? The winter wheat usually planted is liable to so many casualties and drawbacks—the Russian fly, blight, rust, &c.—that it might be well worth while to venture a few lots of spring wheat next year, as they would certainly escape the fly in the fall, freezes of a wet spring, and other destructive visitations to which the *tritium hybridum*, the winter wheat, is liable. Old Ohio farmers have told us that fair crops of summer or spring wheat were raised in this State, in early times, and there seems no good reason why the same thing might not be repeated. A gentleman of the highest standing in the North-west greatly prefers spring to winter wheat as the basis of their best roller-milled flour.

—Texas has made wonderful strides in prosperity during the past three years. The population of 1,501,000 in 1880, was 2,230,000 in 1884; there were 37,500 acres of land under cultivation in 1880, or 13,520,707 more than in 1880; the property valuation in the same time increased from \$31,470,736 to \$503,000,000; in 1884 cereals of an aggregate value of \$65,000,000 were produced and consumed at home, while products of the value of \$110,678,783 were shipped including 1,573,310 bales of cotton, 22,780,230 pounds of wool, and 13,172,746 hides. After all, the value of live stock towers above all other values, reaching \$181,322,480, comprehending 5,500,000 head of cattle, 1,300,000 horses and mules, 7,000,000 swine, 1,623,970 hogs and 500,000 goats.

TANNING SMALL HIDES.—A correspondent desires to know how to tan a hide with the hair on. The following is an old and reliable recipe for tanning a sheep's pelt with the wool on—perhaps it will answer the purpose, he wishes to accomplish; at any rate, it is the best we can give him. Wash the pelt (hide) in warm water and remove all fleshy matter from the inner surface; then clean the wool (hair) with soft soap and wash clean. When the pelt (hide) is perfectly free from all fatty and oily matter, apply the following mixture to the flesh side: Common salt and ground alum 1-4 each, and 1-2 oz. borax; dissolve in 1 quart hot water, and rub sufficiently cool to bear the hand, add rye meal to make it like thick paste, and spread the mixture on the flesh side. Fold lengthwise, and let it remain two weeks in an airy and shady place; then remove the paste, wash and dry. When nearly dry scrape the flesh side thoroughly. The more working the softer the pelt or skin.—Frasier Farmer.

—A writer in a Michigan local paper believes in breeding the wheat plant systematically plan of improving wheat by weeding out all the poor stools and heads from a selected plot, and thus isolating the chosen stock, is practicable and promising. It is the greatest

COLMAN'S RURAL WORLD

THIRTY-SEVENTH YEAR.

BY NORMAN J. COLMAN

PUBLISHED WEEKLY

AT \$1.50 PER YEAR; OR EIGHT MONTHS \$1.00.

ADVERTISING: 40 cents per line of advertisement; reduction on large or long time advertisements.

Address NORMAN J. COLMAN, Publisher
50 Olive Street, St. Louis, Mo.
(Advertisers will find the RURAL WORLD one of the best advertising mediums of its class in the country. This is the uniform testimony of all who have given it a trial. Many of our largest advertising patrons have said it is more than a quarter of a century, which is the highest possible recommendation of its value as an advertising medium.)

We are continually receiving letters enclosing only one dollar for subscription. The price of the RURAL WORLD has been \$1.50 per annum for months past; hence, those who send only one dollar, are being credited for the time they pay for.

*Fine growing weather has favored the farmer during the past week. If anything so far as we have learned, a little too much rain and here and there violent storms. On the whole, however, it has been favorable for the growing crops.

CHOLERA still rages in France, less violently than in the past few days, under the influence of cooler weather, but distributed over a wide area. No positive identified cases of the disease have been discovered outside of that country, however, and it is even now hoped that it may be confined to those limits.

A CIRCULAR has been issued to creamery and butter men, and all others interested in the creamery interest of the State, inviting them to attend a Convention to be held at the Garrison House, Sedalia, Mo., on the 18th of August next, at 10:30 A. M. At this Convention steps will be taken (the circular says) to perfect an organization already established, known as the Missouri Creamery Association. The circular is signed by B. F. Smith, President, Holden, N. J., and I. M. Kellogg, Secretary, Fayette, Mo.

In Michigan an earnest attempt is being made this year to extend the culture of sorghum. The Michigan Agricultural College has this season sent out nearly 500 half-pound packages of sorghum seeds to all parts of the State. In the autumn detailed reports are to be sent in, which will give much valuable information concerning the feasibility of growing sorghum for sugar in that State.

It appears to make some difference with the English "powers that be" whether British cattle or American are kept out of the United Kingdom by the enforcement of needlessly rigid inspection laws. A number of British subjects are interested in ranges in the remote Northwest. They desire to ship their young stock to Liverpool through Canada, and they request is likely to be granted. There is indeed, no occasion to refuse it, or to prevent the importation of American live animals to be fattened in English pastures. Less disease exists among American cattle, even in the thickly settled East, than among those raised in England.

The food and drink of a nation show immense totals. For instance, the 35,000,000 citizens of Great Britain consume annually over 100,000,000 quarters of wheat; 17,000,000 hundredweight of potatoes; 30,000,000 hundredweight of meat; 700,000,000 pounds of fish; 5,000,000 hundredweight of butter; 12,000,000 hundredweight of sugar; 17,000,000 gallons of wine; 1,000,000,000 gallons of beer; 14,000,000 gallons of spirits, at a total cost to the consumers of \$500,000,000, or \$2,500,000,000. It will be seen that the bulk of this vast total is produced by the farmers.

In an article upon the kinds and qualities of silk worms, the South and West are noted for raising the large, pure white cocoons, it is best to purchase the Turkish eggs. These are not considered a two-crop worm, though many of them will produce a second crop in this country. They make a fine, large, pure white cocoon, and are easily raised if properly cared for. The value of the cocoon, as to the quality of silk, must be judged by the size. Frequently large cocoons are very thin, and a small worm will often spin more silk than a large one, the smaller cocoon being the heavier of the two. As a general thing the white cocoons are not so solid, nor do they contain much silk as the straw or yellow cocoons of the same size.

One thing tends to enhance the beauty of a country like that of shady woods, and the planting of trees, whether the fruit, nut, seed or flower bearing kinds, should be observed every fall or spring, and scores of trees planted in the corners of our unsightly fences. The planting of trees along the roadsides of France is a grand good scheme. At present the total length of public roads there is 17,500 miles, of which 7,250 are bordered with trees, while 4,500 miles are at present being planted, or will shortly be planted. The planting of 7,000 miles of the nature of the soil does not permit of plantations. The number of trees already planted amounts to 2,678,603, consisting principally of elm, poplar, acacia, plate, ash, sycamore and lime trees.

No farmer can afford to do without a good supply of fodder corn, even though he may have a good supply of the very best of hay, for milk cows are very fond of fodder corn, and it helps very materially in increasing the yield of milk, while the flow of milk during the cold, wintry months. It is the nearest approach to green food that can have, unless it is ensilage, which we do not consider very profitable for the average farmer. To grow a good crop of fodder corn, a well cultivated and clean piece of ground should be chosen, as early this month as practicable. Have it well ploughed and harrowed, though we would prefer not to harrow until the corn is sown (if sowed broadcast), as it can be covered better by harrowing afterward. To prevent the birds from levelling tribute take the corn, moisten it with warm water and drain it off; to a bushel of corn pour over, in a thin stream, about a tablespoonful of warm tar, after which the oughty mix up with as still every grain is coated, when the corn is sown, the birds will not touch it. It should be sown rather thickly to make a good stand and better fodder. The land should be rich as possible, to force a heavy growth. It should be cut just before it commences to shoot its tassels or top, thoroughly severed, then tied into convenient sized bundles and stored

away for use. This is a good food for the driving and other horses, as it is sweet, nutritious and much relished by all stock. It may yet be sown.

In eight States (Arkansas, California, South Carolina, Illinois, Ohio, New York, Wisconsin and Vermont), where the agricultural and literary courses are combined in colleges, the industrial students number in all 225; agricultural 101, mechanical 144. In five States where the industrial colleges are independent, Colorado, Massachusetts, Mississippi, Michigan and Kansas, there are 336 agricultural and 127 mechanical students. The contrast is a striking one.

The hay crop of this country comes next to that of corn in value. In 1881 the value of the hay exceeded that of cotton by \$90,000,000. In 1881 14,000 carloads of hay, ten tons to the car, were brought into New York. In 1882 14,700 carloads were received there. The transactions in hay in New York in 1882 are said to have reached the sum of \$23,000,000. The hay crop of 1882 was estimated at \$372,000,000. The shipments by water from New York were about 100,000 bales.

THE great loss sustained by keeping cows on poor pastures can scarcely be estimated, especially when they have to drink from stagnant pools. Something can't be got from nothing. The fodder supplied must first be obtained before the cow can give any milk at all, and all the profits consist in the quantity of food she eats over and above that required for maintenance. If she has to wander over a large range of pasture, especially in the hot sun and when the flies are troublesome, the food consumed in producing this mechanical work would otherwise have been used in the production of butter. Hence the necessity for rich pastures and plenty of shade trees. Always remember that under a proper system of feeding, the more an animal eats, the greater will be the profit.

A RAILROAD scheme which fairly goes ahead of all early Pacific enterprises, visionary as they seemed when undertaken, has been proposed in India, and will receive the endorsement of the Imperial Government. It has long been understood that the surest preventive of cholera is the free and rapid movement of the human body. It is the cheapening of transportation from the well-watered and fertile provinces, where food is always abundant. To this end about 4,000 miles of road, which a Parliament has recently approved, is to be constructed "to connect the centers of food production with the population centers and the famine tract," are to be constructed, the home government guaranteeing the interest on the \$150,000,000 loan. A colossal scheme, the part of the proposed railway system will earn dividends, but the rest is to be built as a work of humanity. We have some interest in this philanthropic movement, for the new lines will undoubtedly shorten the competition between Indian and American wheat in the English markets.

Not alone in view of the possible approach of cholera to this country, but also to hasten the cure and prevent its desirability that we have pure water, and that not only for ourselves and families but for stock too. In this connection the Massachusetts Plowman offers a good suggestion.

Water, being as low as is desired a cement pipe, some two feet in diameter, and two or three feet long is sunk at the bottom and worked down as low as possible by digging out the inside. The pipe should be covered over with a flat stone, and the middle of which two holes have been drilled; directly over the hole stand in drain pipe, then begin to fill up the hole, and add drain pipe as the filling proceeds till it comes near the surface of the pump can be attached. A well of this kind is reliable and permanent, requiring no repairs; the water is cool and free from impurities that open wells are subject to; no insects or animals can find their way into it, and the cost is not more than one-half that of a well that is a costly and dangerous thing to be built when the springs are low, a constant supply of water that is pure as the underground springs is secured. As the well is always full, there is no chance for dirt to enter, and the water, and, in fact, but little danger of being polluted by surrounding cesspools, compared to open wells.

The whole country is looking to the farmers to help it out of its embarrassments of trade and finance. For a year or more the manufacturing and mercantile centers are glutted with unsalable goods; prices have fallen, in some cases, it is said, below the cost of production; iron mills are closing up or running on half time. Wages are cut down, and the manufacturers are looking to the heavily taxed farming interest to help it out? Our manufacturers are a favored class. They are protected against foreign competition by a duty of 40 to 60 per cent. on foreign goods, while the Western farmer has no protection on his grain, and the Southern farmer none on his cotton. The Western farmer, while paying tribute to the Eastern manufacturer, has to raise grain for a foreign market in competition with Russia and India, and the Southern farmer, while paying a tax on his cotton for the protection of the Eastern manufacturer, has to raise cotton for a foreign market in competition with India and Egypt. Yet, when the protected manufacturer gets into trouble, as they do every five or six years, they invariably call upon the farmers to lift them out. The American farmer is too heavily taxed. He is expected to take care of himself and the manufacturer too.

The above, from the Republican, tells a part, but only a part, of this wonderful story. The farmers are not clamoring to be protected from the pauper producers of Europe, not even from Russian or Indian wheat. In reply to a number of queries about millet, it may be explained that there are a great many varieties of this grass. The sort known as German or golden millet, has largely superseded the other kinds, being the best for a fodder crop. At one time it was thought that millet was a sufficient food for stock without the aid of anything else. The fodder was hay and the seed was corn. But experience has demonstrated the fact that when hay ripens its seed its usefulness in large measure ceases. Were stock fed exclusively on seed heads, with a suffi-

ciency of good hay, they would thrive well, or if the millet is cut while in the flower, or even when the seed is in the milky state, and fed to stock in combination with grain, they do well. Fed alone, the grain proves too laxative.

A special recommendation of millet is its large yield and its power to withstand drought. Then, too, for a fodder crop, it can be sown late after other crops are out of the way. It is also an excellent crop to grow on land foul with thistles and dock.

Common millet will mature its seed in about six days after the seed is sown, and pay for growing the crop, leaving the hay for clear profit. The seed, when ground and mixed with corn or other grain, furnishes a good feed for cattle, swine and poultry. Golden or German millet requires a longer season, but is usually sown in June, and at the North is sown much later, when it will make a full growth of stalk but not mature its seed. Millet should be cut before the frost touches it.

FARMERS AND CREAMERIES.

It is announced that the creamery at Lamar in Barton county is about to close. It has been in operation only a few months, and has not been profitable; on the contrary, it has lost money, and the proprietors have determined to close for the present. A creamery cannot be successfully conducted without the co-operation of the farmers who live around it. They are intended chiefly for the benefit of farmers, and are entitled to their support; if they fail to receive this, they must fail. The difficulty with the Lamar creamery is that its wagons have to travel too great distances to secure the supply of cream it needs. Only a few farmers are within its radius of action, and the majority stick to the old habit of raising staple crops and selling them in a raw state for what they will bring, regardless of the fact that the most intelligent and profitable farming method is to convert their grain and grass into the more valuable compact form of milk and meat. There is no good reason why a well conducted creamery should not succeed at Lamar as well as at La Plata, Flatbush, Monticello, or any other point in North Missouri. It certainly would succeed if supported by a sufficient number of small dairy farms within easy reach to furnish it with the requisite quantity of cream to keep it active, and to keep its full capacity.

It is stated that good butter is higher at Lamar since the creamery was started than it was before—a fact which proves that the local market has not been overstocked.

Encouraging to know that the creamery experiment in North Missouri has met with better success than at Lamar. Some forty odd establishments have been started in the northern and central counties, and notwithstanding the obstacles and difficulties that attend new enterprises, we hear that nearly all are doing well and growing in favor. The welfare of the agricultural interest is associated with the maintenance of the system, and when the time comes, as we hope it will, that shall see the number of creameries north of the river trebled, it will be found that the highest priced lands are in the vicinity of the establishments.

The foregoing from a city daily discloses a fact that all, having knowledge of the creamery business, counted on. Weak men are found in every industry, hence we have the "survival of the fittest," and strong men are found in the same line, hence we have success. That the ultimate result in Missouri will be success, no one having investigated it doubts for any moment.

THE NEW ORLEANS EXPOSITION.

We have made frequent references to the importance of this last and best of "World's Fairs," but have met with nothing conveying an idea of its possibilities and difficulties that attend the accomplishment, that will compare with the following from the New York Herald: "The coming World's Industrial Exposition at New Orleans is assuming the proportions of a grand and comprehensive and systematic advance upon the inviting but partially supplied trade fields of Spanish America and the countries surrounding the South Pacific Ocean. The popular and urgent demand for new markets for our surplus manufactures will here find an ample outlet, and one which has been too long neglected. Spanish America is dependent upon the outside world for manufactured goods. Mexico, Central and South America now import nearly \$410,000,000 worth of merchandise. Of this the United States supplies only \$71,000,000; in other words, but about one-sixth part. The chief portion of the demand is supplied by Europe. Such a state of affairs is a disgrace to American enterprise; and now supply at least two-thirds of this demand."

But the amount of the present imports of these American countries on the south is but a drop in the bucket compared with the demand. It is the early failure by the inevitable result of railway construction and the new era of material development and progress upon which they have recently entered. The coming Exposition will supply our manufacturers with the most advantageous introduction to the representatives of 42,000,000 consumers, for the American countries at the South are making elaborate preparations and will be the most conspicuous participants.

Mexico has already appropriated \$200,000 for this purpose and will occupy 50,000 feet of space within the buildings and 200,000 feet outside. The latter space to be used in part for a camp for a company of Mexican soldiers. Several of the Mexican States have made appropriations and will participate on a comprehensive scale.

Situated as New Orleans is at the very door of Spanish America and at the mouth of the Mississippi River, which, with its forty-two commercial tributaries is navigable 15,700 miles and intersects twenty-one States and Territories, an exhibition held there must for this reason alone be a success. It is a national gateway between the interior of the United States and the neighboring, but too long neglected, foreign markets on the south—markets which, for more reasons than one, our manufacturers will find it profitable to cultivate.

Of nearly equal importance are the foreign markets of the Pacific, which will soon be in direct communication with the Mississippi Valley by means of the interoceanic highways across Tehuantepec and Panama. The annual imports of merchandise by Australia and the various countries of Asia which rest upon the Pacific amount to \$523,053,000, of which we supply only \$20,497,000.

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River and its practical prolongation to the Pacific by the opening of the Isthmus of Tehuantepec, the proposed establishment of new steamship lines from the mouth of the Mississippi to Spanish-American ports, and other great works soon to be inaugurated, the exhibition at New Orleans is exceedingly timely. It is located where it will do the most good, by helping to build up two weak sides of our present foreign commerce, that of Spanish America and the nations and islands surrounding the South Pacific.

Director General E. A. Burke said of this aspect of the coming Exposition recently: "New Orleans is the natural gateway to those countries, both by land and water. An exhibition held there will create a tidal wave which should have been started years ago."

Notes—Correspondence.

—We are just having, at this writing, the finest rain of the season. This insures the corn crop for this year, it is looking well and will be an abundant yield. Wheat turned out well, Northern sugar cane will prove equally good, and potatoes could not be better. Flax, ryegrass and clover are all good, and the grand prospects for Southern Kansas is bright.

EDITOR RURAL WORLD: In view of the market fact offered by Colorado and the fruit growers and dealers of other States, and also in view of the enormous sums of money sent out of our State to supply an increasing demand for fruit, we extend to parties from other States seeking this market for the disposal of their fruits or other products, and who are desirous of advertising, desire to exhibit at our National Mining and Industrial Exposition, which will open in the city of Denver on September 1st, and close October 4th, a cordial invitation to join us with the support of no charge for space.—D. S. Grimes, Sup't. Department of Agriculture and Horticulture, Denver, Colo., July 28th, 1884.

—Where can I get German carp large enough to spawn next year. I wish to buy them to get them large enough as they sent by Fish Commissioner are small. By answering the above you will confer a favor on a subscriber and lover of the RURAL. Wish you success remain yours,

HARDINSON, Ill.
C. P.

Addressing the above to the State Commissioners we have the following reply: GOV. N. J. COLMAN: Dear Sir—In regard to the inquiries of the letter you sent me: 1. The fish commission does not keep any carp, or is not practicable to ship spawning fish any distance. 3. It is a State institution and we are not permitted to ship carp to applicants outside of Missouri. If you will inform the gentleman to apply to the Illinois Fish Commissioners they may accommodate him.

Yours very respectfully,
PHIL KOPPLER, Jr.,
Forest Park, St. Louis, Mo., July 25, 1884.

A Judgment.

EDITOR RURAL WORLD: We have had a glorious season up here, the best for many a year. The crops are all well and everything went swimmingly until last Saturday, the devil sent a show along which seemed to upset and demoralize this whole country. All the roofs left home at a break-neck rate, the hay fields were neglected, then storms came, and the crops were all spoiled, hay spoiled, buildings unroofed and consumed by lightning, and great destruction and tribulation scattered right and left, which according to the good old orthodox doctrine is but a just punishment on this wicked generation. But, if so, why should those of us who had sense enough to be able to furnish themselves with the necessities of life, and conscientiously justify themselves in not being able to pay their most pressing debts, will go to these shows, and are no more certain to say "humbug" than they are to patronize the next show? With keeping dogs, the poorer the people are the more "ornery" they are in both these cases. This show day being pleasant more good hay could have been made that day than these five wet days since. This whole country now presents a sorry picture of humbug. Nearly \$410,000,000 worth of merchandise, of this the United States supplies only \$71,000,000; in other words, but about one-sixth part. The chief portion of the demand is supplied by Europe. Such a state of affairs is a disgrace to American enterprise; and now supply at least two-thirds of this demand."

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The Centralia Sale.

We have the catalogue of the sale of Short-horn cattle to come off at Centralia, Mo., on August 7th next, which has been time and again referred to in these columns. The catalogue will convey every one of the accuracy of our statements made a month ago, that the breeding of the cattle to be sold will surprise those who read it. Mr. Allen, the compiler, has aimed to make it more thorough and complete than any ever gotten up in the name of a sale, and her color and breeder, the name of her sire, and his registry number, his color and breeder. This, together with voluminous foot notes, makes of the catalogue one of the most complete we have seen.

The foot notes are of great interest in that they afford an insight into the origin of families, who sold, who bought, what they paid, where they went, what became of them, and what their progeny.

The animals in the sale are of excellent families, have been raised well, had good food, and have been handled by the best of breeders every one. No barren animal, no faulty animal will be found in the sale, and those of age will be found Short-horn all over, and the young things inheriting their excellent qualities.

We commend this sale to the attention of the farmers and stock raisers of the same five years. This should be at least one animal affected with foot and mouth disease in 1883, against 37,500 in 1881, 184,000 in 1881, 32,375 in 1883, and 12,947 in 1879. Pneumonia attacked only 931, as compared with 1,200 in 1881, 1,737 in 1881, 2,681 in 1880, and 4,296 in 1879. Of the other diseases, Great Britain for the same five years. This should be at least one animal affected with foot and mouth disease in 1883, against 37,500 in 1881, 184,000 in 1881, 32,375 in 1883, and 12,947 in 1879. Pneumonia attacked only 931, as compared with 1,200 in 1881, 1,737 in 1881, 2,681 in 1880, and 4,296 in 1879. Of the other diseases, Great Britain for the same five years. This should be at least one animal affected with foot and mouth disease in 1883, against 37,500 in 1881, 184,000 in 1881, 32,375 in 1883, and 12,947 in 1879. 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The Home Circle.

HER BONNET.

(From The Century "Brie-a-Brac.")

When meeting-bells began to toll,
And pious folk began to pass,
She dutifully bowed her head,
The little, soot meeting-bell,
All in her neat, white-curtained room, before
her tiny looking-glass.

So nicely, round her lady cheeks,
She smoothed her bands of glossy hair,
And innocently wondered if
Her bonnet did not make her fair;
Then sternly told her foolish heart for har-
boring such fancies there.

So square she tied the satin strings,
And set the bows beneath her chin;
Then smiled to see how sweet she looked;
Then thought her vanity a sin,
And she must put such thoughts away before
the sermon should begin.

But, sitting 'neath the preached word,
Determined, in her father's pew,
She thought about her bonnet still,—
Yes, all the parson's sermon through,—
About its pretty bows and buds which better
than the text she knew.

Yet sitting there with peaceful face,
The reflex of her simple soul,
She looked to be a very saint,—
And may be was, on the whole,—
Only that her pretty bonnet kept away the
aureole.

—MARY E. WILKINS.

From Walnut.

CIRCULAR FRIENDS: For the first
time in three months of constant work
and worry, I have a "half holiday," and
propose to celebrate it by having a short
visit through the medium of our Circle,
with distant friends—unseen, but not
forgotten.

The RURAL of July 17th is just at
hand, and turning quickly to the Circle
page, I notice a poem from Pauline—
"Little Chicks"—what a perfect, dainty
little gem of a poem that is! It is really
refreshing to read something that has
the genuine ring of poetry, after so much
hard, far-fetched rubbish. It is seldom
we see lines that ripple along so gaily
and smoothly, and with so much life and
vivacity.

Pauline is an old-time writer, who has
not been in our midst for many long
months. We welcome her in the name
of the whole Circle for her to come
again and again, and bring her penciled
treasures, for the little ones' sake, if not
for us grown-up children.

We would not utter a word disparag-
ingly of Idyll's poems—for hers are gen-
uine. The plaintive tenderness of her
last—"My Picture"—will find an echo
in the hearts of many mothers.

An Arkansas lady wants to know
whether "it is a white Walnut, or a black
Walnut?"

Well, now, really that is a queer con-
undrum—and not so very easy to answer.
There is a beautiful grove of walnut
trees through which I pass daily, and from
my work they are loaded with an abundance
of green walnuts—perhaps they are the kind she means; or, it may be because its heart is like the heart
of the black walnut—darkly stained. How-
ever, on second thought, I think "it
must be the 'white' Walnut," because
although when it is young it is "green,"
yet when it gets ripe it is not a
"doughnut"—but a "butternut." Dough-
nuts and butternuts are both good to eat.
But which is the right position,
without the "nuts," form "bread-
butter," the "staff of life."

Is the query answered to your satisfac-
tion, Mrs. H. A. B.?

Idyll, I am glad you have had the op-
portunity of "visiting" once, and the op-
portunity made so dear to you by some of
the chiefest joys and sorrows. Before
a twelve-month has rolled by, I hope to
revisit the home of my earlier years, and
renew the acquaintances of old-time
friends, and meet in glad reunion the
class-mates of yore.

Mary Glendolen, am I so very "terri-
ble"? If so, it is well I do not write
for the RURAL; I might frighten
everybody away. You are just too mis-
chievous for anything. You rollicking
good humor has its place among us.

Bon Ami, I am glad you had the moral
courage to acknowledge an error. Had
your letter appeared a little sooner, my
subsequent criticism should never have
seen the daylight of a printed page; as it
is, I am sorry it was published, for it
was not necessary—your letter virtually
ending the controversy.

Your manly conduct causes us all to
respect you for your own true worth as a
man; and to hope, now that you are
so good, you will write just for the fun of it.
If you send forth articles rich in
bought and knowledge and experience,
and help to build up the Home Circle,
it shall command the respect and
admiration everywhere for its real
worth, for its educating, elevating, en-
nobling influence. The Home Circle
needs you—needs us all—let us labor to-
gether harmoniously for its good.

Bon Ami, I can sympathize with you
better, perhaps, than most others, for I
have been a sufferer for years from the
same difficulty as you and friend Idyll.
Adieu to all.

WALNUT.

A Cottage in the Woods.

I have been a reader of the Home
Circle for some time, and am quite in-
terested, although only a youth of six-
teen years. I came from Missouri some
months ago, and am living in the Pine
forests of Florida, all alone. Am my
own cook and housekeeper, the dumb
brutes being my only companions. And
as to (quote Charlie, the new-comer), my
thoughts need airing, and my stock of
knowledge quite small, I hope the Circle
will allow me to spread them in its
bright sunshine to dry. So please don't
"blackball" me. I write under the im-
pression that some will take pity on my
forlorn condition, and, as this is leap
year, propose. Wouldn't it be jolly to
have some one to take care of me?

MEMO.

Palatka, Fla.

Little Things of Great Importance.

Infections are supposed to spread by
germs, or microscopic plants, which en-
ter the lungs and blood of persons who
come within their reach. The time of
absorbing these germs, which germina-
tion, varies in different maladies. Other
organisms lead a similar course. The
puffball, when matured and ruptured,
throws out millions of cells or germs.
The pollen of the pine tree flowers
float and spread far around. And thus
the germs of infection float and deposit
themselves on persons and things. On
woolen garments they retain life for
years. These extremely small bodies
are called by the general term Bacteria.
Forty thousand of these Bacteria, placed
end to end, will not reach more than an
inch.

Size is not always the measure of im-
portance. Many a housewife has found
her bread, nearly new, covered with a

light coating of the most delicate sub-
stance. The bread-mould is one of that
low order of plants known to botanists
as Fungi. The mushroom, noted for its
rapid growth, is a member of this group.
The principal part of a toadstool, or puff-
ball, is below ground, or within the sub-
stance bearing the fungus, and consists
of very fine threads. These filaments
are of simple structure, branches freely,
and run in all directions through the
substance from which the fungus is de-
riving its nourishment. The umbrella-
like cap formed on the stalk, bears on its
under side vast numbers of small oval
bodies called spores, which correspond
with the seeds of higher plants, though
more simple in structure.

With this knowledge of one of the
larger forms of fungi, we are ready to
return to the bread-mould. This fungi
is much smaller than any toadstool, and
similar substance. The fine threads,
much finer than spider-webs, grow very
rapidly when the bread is moist, and the
air is filled with hot vapor. Somewhat
like the mushroom, the bread-mould
sends its filament all through the sub-
stance upon which it is feeding, and when
it has grown sufficiently, it sends up
stalks to the surface, and upon these
multitudes of spores are borne on the
tips of branching threads; these, when
mature, are bluish in color, and give the
bread a blue coating, a easily mistaken
after having been seen. The writer
will not soon forget the dark influence
this same blue mould has upon cream
cakes. The fungus had thrived for some
time upon the creamy interior, while all
about was fair to look and bite upon.
But that is another story to this subject,
which we hope to give in the near fu-
ture.—Mrs. F., in Western Farmer.

City vs. Country Life.

"Oh, dear! but the country is tiresome.
The same thing over and over again; no-
body to see; nothing to do. The Smiths
call and I know beforehand just what
they'll say. The Browns ask us to tea,
and I know just what we'll have and just
what we'll do. I wish the river could be
got to rise and flood us out, or that we
could get a little bit of an earthquake to
shake us up, or a young volcano to send
us out of this. When one is awfully
lonely.

Towered cities please us then,
And the busy hum of men.
Don't you think so, uncle?"

"Why, Katie, you are growing poeti-
cal, or at least you remember your poet-
ical, and I am glad. I like the lines
of Milton. But there is other poetry:
Near a whole city full
Friends she had none!

You can be as solitary in a big crowd as
in a room by the river, or on the side of
a mountain where you, wicked girl,
wish for the volcano."

"Uncle, I don't believe that. I've read
it in books, of course. Why, you have
neighbors all around you, and, of course,
a great many of them. I like to live in
the country. But there is other poetry:
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honor. Take one of the railway kings.
Why, they interview him, lie to him, lie
about him, and if I speak civilly to him
he does not know but that I have a road
to put off on him, or a point to get for
to-morrow's market. And as for quiet,
why, he cannot—just look here in my
paper of this morning: 'Tom—who con-
trols the road in—is forbidden
to drink coffee; it is doubtful if he can
long hold his presidency. He is a
cheerful reader for Tom, is it
not, and for Mrs. Tom, and his family?'

"Well, but, uncle, that is an extreme
case. There are lots of people in all
those rows of nice brown-stone houses,
with none of such troubles, and with all
they need."

"Of course, and there are lots of nice
people in the country, Katie, never pray-
ing for a volcano, like you, nor dwelling
on the poetry of drowning themselves in
the dull river there to get rid of monon-
y. But there is this about those nice
brown-stone houses, Katie, that you did
not see as you drove through the city on
the way to Lake Mohawk. The mort-
gages are not posted on the hall doors,
and the money is not in the hands of a
single man. What is the meaning of all
the apartment houses going up? Why, they
mean that a crowd of people wish to ap-
pear in good circumstances and find it
hard to do it. There are struggles, and
pinches and needs, and the money is not
in the hands of a single man. Along Fifth
avenue, just as truly as round the corner
of your fine mountain and along the sides of
your 'soft-flowing river.' Don't get
your hair prematurely gray, Katie. Hair
is the darling of the woman, and the
wrinkles are bad, and not worse,
though, than filling up with enamel and
rouge. Be content, child. 'God Al-
mighty,' says Bacon, reverently, 'first
planted a garden.' Only think of half a
million of city people longing for the
country life, saying amen to Rogers' wish:

Mine be a cot beside the hill;
A beehive's hum shall soothe my ear;
A willow brook, that turns a mill,
And with many a fall, shall linger near."

"There, now, uncle, when you break
out into poetry you know there's no
chance for me. You know well enough
what I mean; and you know yourself
you could not be paid enough to make
you live here."

"Now, now, Katie, you are getting in-
to personalities. I tell you, my
child, seriously and truly, I never had
happier days in all my life than in the
country, when I was not rich, nor—your
uncle, Katie, that I never chose the
town, but it was chosen for me; that I
am happy in the country, and I like to
live in it, and that if I ever pine, I know
what you are thinking—for the time to
go back to the city, it is because the city
has spoiled me—made its stir and work
necessary to me—much as the opium
makes it to the addict. I like to live in
the country, and I like to live in it, and
as the run does with the drinker of it.
Take my advice, Katie, do not fret any
more over your country life; do not paint
false pictures of the city, and wish you
were a part of them. Our real happiness
depends more on what we are in our-
selves than on the use of Arnold's big word-
our 'environments.' Be good, true, ap-
preciative and content in the country,
and if ever your lot is to live in the city,
you will get on all the better there for
your country life—two-thirds of the
strong men in all cities are country-bred
—and you will chuckle with inward de-
light even among trunks, packing-cases
and confusion, as you tell your Spring
callers year after year. We are going to
the country."—Rev. John Hall in the
Ledger.

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Dey Street, New York, has been sent
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The Dairy.

Officers Mississippi Valley Dairy and Creamery Association.

President—Norman A. Colman, St. Louis.
Vice President—Joe W. Drury, Waterloo, Ill.
Second Vice President—Joseph E. Miller, Belleville, Ill.
Treasurer—Wm. N. Tivy, 424 North Second St. St. Louis.
Secretary—Joseph W. Sheppard, 600 Olive street St. Louis.

THE MILKING HOUR.

You good old Boss, stand quietly now, and don't be turning your head this way; You're looking for Donald, it's plain to see, but he won't be here to-day.
Nobody came to milk you, dear old Boss, Not even to carry my pail; for, you see, Donald's gone whistling down the lane, and Donald is vexed with me.
And all because of a trifling thing: He asked me a question, and I said "Nay," I never dreamed that he would not guess it was only a woman's ways.
I wonder if Donald has ever learned The motto of "Try and try again." I think, if he had, it might have been He had not learned in vain.

And there needn't have stretched between us two On this fair evening, the meadow wide, And I needn't have milked alone to-night, With nobody at my side.
What was it he said to me yesterday eve, Something about—about my eyes? It's strange how clever that Donald can be; That is, whenever he tries.

Now, Bossy, old cow, you mustn't tell That I've cried a little while milking you; For, don't you see? It is nothing to me What Donald may choose to do.
If he choose to go whistling down the lane, He choose to stay gazing coming here, But he's lonely without him after all; I don't like it, Bossy dear.

I—hark! who's that? Oh, Donald, it's you! Did you speak—excuse me—what did you say?

"May you carry my pail?" Well, yes; at least, I suppose, if you try, you may.

But, Donald, if I had answered No, Do you think it would have occurred to you Not to be vexed at a woman's way?

But to try what coaxing would do?
—M. D. Brine, in Harper's Weekly.

More Missouri Butter Tests.

EDITOR RURAL WORLD: In addition to the butter tests recently made at Jerseydale Farm and published in your paper of July 17th, page 231, I take pleasure in forwarding to you an account of two more tests.

This is to certify that I personally made and superintended the following tests of the Jersey cows below given, belonging to L. W. Douglass, Pevely, Mo. The cows were milked for twelve hours before the tests began: 1st, Hattie Douglass 24,900 gave June 7th to 13th inclusive, 7 days, 262 lbs. of milk, and made in two churnings 16 lbs. 5 1/2 oz. of solid butter packed ready for market. Feed per day, 10 lbs. of clover hay, 10 lbs. of wheat bran that cost 10 cents, and mixed grasses for pasturage. Hattie is one of Col's Hattie 705 and sired by Dainty Boy 2,555.

2nd, Melody P., 2689, gave June 14th to June 20th, inclusive, 7 days, 300 1/4 lbs. of milk, from which was made in two churnings, 14 lbs 1 oz. of solid butter, packed ready for market. Melody is now 12 years old, and I regard this test very fine for so old a cow. She was sired by L. M. Lusk and out of Melonnie 693, and sired by Duke of Jersey 198, one of imported Per 110, one of the best cows ever imported. Melody's dam is a grand daughter of old Dugess 374, (14 lbs. on grass alone) and a g. g. daughter of imp. Pansy 8, one of the greatest cows ever sired. Melody is a splendid breeder, perfect square udder, and last year at the great St. Louis Fair won 1st prize of \$100 as best cow 4 years old and over. H. W. DOUGLASS, Jerseydale Farm, Pevely, Mo.

Marketable Butter.

"Pass the butter gently, Mabel, Shove it lightly through the air; In the corner of the dish, love, You will find a nut-brown hair. When the cream comes to the surface Of the days we were wed, When upon my fine coat collar Oft was laid your little head. Lovingly I stroked those tresses, In the happy days gone by; Now I strike them every meal time In the butter on the pie!"
—In Justice, May 24, 1884.

The high-priced golden edged Jersey butter that sells readily in the market, is put up in neat printed half pound, or pounds, in snow-white muslin. It is cool and redolent of aroma.

"People who make butter should be clearly Christian. Paper, dairymen's protectors. Cheesy specks are decidedly objectionable; but when dirt specks and hairs are intermixed with butter, it is damning to the dairy-maid and the dairy." The Cotentin butter of Normandy that sells for \$1.25 in Paris, is pure as chrysalis. The cows are brushed, the udders washed and dried, the milkers clad in clean milking blouses, the milk doubly strained, the cream set in a cool, clean room, skimmed with clean care, and churned and worked in the neatest manner. Both cleanliness and quality of butter made the reputation for Isigny, Le Bessin, Calvados, and Gournay. And in Orange county, N. Y., the same factor—cleanliness—made Orange county butter famous.

Godliness, cleanliness and care, are essential qualities in butter making. Neatness is a paying element in the dairy. The neat woman should be admired. Blessed above women shall Joel, the wife of Heber, the Kenite, be; blessed shall she be above women in the test. He asked for water, and she gave him milk, she brought forth butter in a "Lordly dish." Judges, xiv, and xv.

Consumers can not be deceived as to the cleanly quality of butter. "The words of his mouth were smoother than butter, but war was in his heart." Psalms. We believe that the butter-maker's hands should be clean, and his eye single to the purity of the product. A golden tress looks best upon a maiden's head; but a black hair in golden butter is disgusting.—Jersey Bulletin.

Change of Feed for Cows.

After a decrease of milk has commenced on account of insufficient food it is very difficult to recover the shrinkage however well the cows may be fed, says the Chicago Times. This is the experience of almost all dairy farmers. Great pains must be taken to prevent this shrinkage. It is generally advisable to feed some cut food before the pastures begin to fail, so that the cows will become accustomed to eating it. A sudden change from one kind of feed to another

generally leads to unfavorable results. The change should be made gradually. Cows, as well as other grazing animals, relish an occasional feed of something besides grass, even when pastures are in their best condition. They will eat dry corn meal, bran, and even old hay, and appear to derive much benefit from it. Much cows should be fed liberally during hot and dry weather, even if the feed in pastures is tolerably good. They should not be required to walk about all day in search of food. If they are continually on the move their milk is poor condition. They should be fed so liberally that they can lie at rest a considerable part of the time.

When Should a Cow go Dry?

There is such a thing as burning a candle at both ends. One may easily do this in the dairy, and while the "good, easy man" thinks he is making a good deal of light at the same cost, suddenly his candle may go out. This kind of thing may go on when one milks the cows up to the time of calving or near it, and even encourages it by feeding it for that end. But then it may not. And it is the dairyman's business to know all about it and take any general rule for his guide. There is no rule without a number of exceptions, and these are as numerous as times, places and circumstances; and as circumstances alter cases, so the reply to the question we have put above depends upon circumstances. There are cows that will not go dry, but will milk from calf to calf. It is the dairyman to worry himself and the cow in "useless defiance of her natural habit." By no means. He must suit his case to the circumstances, and reduce the milk yield as much as possible by milking once a day perhaps, and compensate the cow for her extra burden by giving her more feed up to a safe limit. What this limit may be depends wholly upon the ability of the cow to healthily digest and dispose of the food. And no one but an intelligent owner can say what this limit may be, for it will vary as cows vary, and no two cows are precisely alike. As long as the cows are in thriving condition, not losing flesh or making fat, the limit is not reached.

But as a rule, to be contracted and expanded judiciously and safely, it might be said that a cow should be dried off six weeks before she is due to calve. That up to that time she should be liberally fed in the usual manner; that thereafter her food should be curtailed, and even changed to dry hay; and if her condition is reduced somewhat, so much the better. It will make it safer for her and the calf. The milking may be done once a day, or not wholly completed, leaving a little in the udder. We have seen a little milk several times a day from a cow in this condition, with the effect of rapidly drying the udder. But it is a dangerous thing and one to be avoided. It takes a very considerable quantity of milk in a cow's udder at this time.—The Dairy.

Improve the Quality of Butter.

The ambition of our dairymen should now be to raise the quality of their butter to the highest point of excellence; and when they have done this and we have properly improved our packages for shipment abroad, we ought to be able to export to Europe and South America fifty million dollars' worth of butter per year. We have the grandest territory for butter production in the world; our resources are almost unlimited, and this should grow to one of our largest exports. We think there is any cause for permanent discouragement in this dairy industry. Our principal anxiety now should be to perfect our process of butter making and packing for shipment, to get the highest quality and flavor, and to be able to put it up so as to retain this indefinitely after shipment.

We are now making greater efforts than any other country to develop the dairy cow, and shall no doubt succeed in reaching the highest productiveness, as well as the highest quality, which ought to make dairying one of the most profitable specialties.—National Live-Stock Journal, Chicago.

—One of the most remarkable of the machines now coming into use, and one that if generally used will make greater changes in butter-making than has been made by almost any other means, is a machine which by centrifugal force separates the cream from the milk and takes from both, in a very short time. At a recent trial of one of these machines at Madrid, N. Y., at which a number of dairymen were present, in nine minutes thirty-one pounds of cream were separated from 123 pounds of milk. The cream at the rate of 82 pounds of milk and 207 pounds of cream per hour. The cream was churned immediately after the separation, yielding 5 1/2 pounds of butter, or at the rate of 36 3/4 pounds per hour, or at the rate of 20 pounds of butter for each pound of butter from cream not allowed to ripen. Describing the advantages offered by the centrifugal machine, the American Dairyman says: "Whether you buy crocks, tin pans, large pans, patent butter churns, or any of a dozen creamers now in the market, there is more or less water and slops about them, and this accompanying dampness is an absolute curse in any dairy-room. It is something for the dairywoman to sit at and scrub at all her life; then ice is a heavy, clumsy, and slippery thing to handle, and wet boxes must be scrubbed out early and often to keep them sweet and clean. The combined cost of room, utensils, and creamery will be more than a centrifugal separator. Time, also—the great element in good butter-making—is reduced to the minimum with the new machine."

How TO SELECT A COW.—Many persons select a cow from their knowledge of a single indication denoting quality, but it is claimed that the best sign of richness of milk is deep orange color inside the ears. Such is said to be infallible, but there are accompanying points that assist the expert in making this selection from a number. After examining the ears, the little veins in the nose, and observe that it should be soft, velvety and falls again to its position when the hand is removed. The hair should be fine and silky, with a yellowish cast underneath. The milk veins should be very prominent, uniform, and the udder well balanced, extending full to the rear, and well forward in front to the main milk ducts that extend along the belly. The bones should be fine, the udder and expressive, the body showing a tendency to avoid accumulating fat, the teats even and at regular intervals, with the escenthous well defined, dandruff being easily rubbed therefrom, and the cow should give indications of being a good feeder.

FOOT-AND-MOUTH DISEASE.—This much-dreaded cattle malady has made its appearance in the quarantine at Quebec and it is alleged that it was brought over by the same party that caused the trouble at Portland. All reasonable precautions have been taken by the Canadian authorities to prevent the spread of the disease.

The Pig Pen.

Pig Feeding Experiments.

MISSOURI AGRICULTURAL COLLEGE FARM, COLUMBIA, MISSOURI, July 1, 1884.
S. S. Laws, L. L. D., President University of Missouri.

SIR: In reporting the results of the following experiments, allow me to repeat that this, as most of my experiments are, is but one of a series of parallel trials, extending over years sufficient to give certainty to conclusions, and thus to establish a fact or facts for agriculture upon which all may practice with certainty, under like conditions.

Three lots of shoats, of four in each lot, were weighed March 15, 1883.

Lot 1, weighed 344 lbs. and was fed whole corn.

Lot 2, weighed 340 lbs. and was fed corn meal.

Lot 3, weighed 336 lbs. and was fed ship stuff.

Lot 1, ate in 63 days, 687 lbs. and gained 116 lbs.

Lot 2, ate in 63 days, 580 lbs. and gained 116 lbs.

Lot 3, ate in 63 days, 808 lbs. and gained 188 lbs.

CHANGE OF FOOD.

Lot 1, food, corn meal, from May 17 to July 7.

Lot 2, food, whole corn, from May 17 to July 7.

Lot 3, food, ship stuff, from May 17 to July 7.

Lot 1, ate 762 lbs. and gained 134 lbs.

Lot 2, ate 552 lbs. and gained 84 lbs.

Lot 3, ate 718 lbs. and gained 144 lbs.

Total whole corn fed in 116 days, 1,239 lbs.

Total gain, 164 lbs.

Total corn meal fed in 116 days, 1,612 lbs.

Total gain, 250 lbs.

Total ship stuff fed in 116 days, 1,524 lbs.

Total gain, 232 lbs.

Gain per 100 lbs of corn, 13.2 lbs.

Pounds of corn eaten per lb of gain 7.5 lbs.

Gain per 100 lbs of corn meal 15.1 lbs.

Pounds of corn eaten per lb of gain 6.4 lbs.

Gain per 100 lbs ship stuff, 16.5 lbs.

Pounds of ship stuff eaten per lb of gain, 6.0 lbs.

The growth is but about one-half that received by me per 100 lbs of food under favorable conditions, yet, as an experiment, is no less valuable. What were the favorable conditions? Spring pigs, thrifty from the start, and kept in pens from the start, in a cool basement of a barn. These shoats had the stinging insect, the open air, or straw shavings of winter. They were taken from roaming and confined in a pen where they could view other pigs at large. They were exposed to the heat of the open air, although not without covering from rain. The gain was better in the second period, as did the sets reported in the last Bulletin confirming the view expressed in that Bulletin, that the stinging influence of our Missouri system of wintering is costly, and that spring pigs are much more profitable. To neutralize and better the favorable conditions? Spring pigs, thrifty from the start, and kept in pens from the start, in a cool basement of a barn. 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The Stock Yards.

Weekly Review of the Live Stock Market.

The receipts and shipments for the week ending Tuesday, July 26, were as follows:

Table with 4 columns: Day, Cattle, Hogs, Sheep, and Mules. Rows for Wednesday, Thursday, Friday, Saturday, Sunday, Monday, Tuesday, and Total.

RECEIPTS.

Table with 4 columns: Day, Cattle, Hogs, Sheep, and Mules. Rows for Wednesday, Thursday, Friday, Saturday, Sunday, Monday, Tuesday, and Total.

SHIPMENTS.

Table with 4 columns: Day, Cattle, Hogs, Sheep, and Mules. Rows for Wednesday, Thursday, Friday, Saturday, Sunday, Monday, Tuesday, and Total.

Cattle thieves are getting in their work near Ennis, Texas, forty head of two-year old steers were lately stolen in one night last week.

The Herperian Cattle Company of Jefferson City, with a capital of \$300,000, has been incorporated. The directors are Phil E. Chapman, H. Clay Ewing, and Jackson L. Smith.

J. H. Standard, secretary of the executive committee of the Colorado Stock Growers' Association, has written to the Hotel committee requesting that thirty rooms be engaged for the Colorado delegates to the Cattle Convention this fall.

What may prove to be hoof and mouth disease, is breaking out among the cattle near Shelbyville, Ill. The animals are affected in the head feet. The cases will be examined by competent veterinarians, who will report the real nature of the disease.

Secretary Atwater says he is constantly in receipt of letters from associations, desirous of obtaining rooms for their delegates. The prospects are that all the hotels will be filled by the first of October for the Convention week. The booking of rooms began about the first of the present month. Fully 1500 people are expected from Texas alone.

About the largest sale of horses that has occurred in this country, was consummated in Texas a few days ago, in which over 2000 head changed hands at \$25 per head. The purchaser added this number to a herd of 1000 which he already owned, making his total number of horses over 3000 head, and worth, at a low estimate, not less than \$80,000.

The value of live stock, in Texas in 1883, reached \$181,225,480, comprehending \$500,000 head of cattle, 1,305,000 horses and mules, 1,000,000 sheep, 1,025,970 hogs, and 500,000 goats.

It is estimated that 8,000,000 sheep have been killed by the drouth in Australia during the last year.

Mr. T. G. Stevenson of Colorado Springs has a flock of 500 sheep grazing in La Animas County. The gentleman has just completed the shearing, and says his stock will average right close to seven pounds each.

From July 8th to the 16th, the shipments of cattle over the Fort Worth and Denver City Railway aggregated 31 cars or 7,247 head of the entire shipment. Wichita Falls was credited with 449 head.

The Pittsburgh Stockman on the shrinkage question at Chicago says: "Synonymity is generally and rightfully against the packers who are assuming unwarrantable grounds in attempting to perpetuate a long-standing and outrageous abuse."

About 1,100 head of cattle have been shipped last week for Boston to London and Liverpool.

Neat cattle imported from any part of the world except North and South America can only be landed at such ports on the Atlantic seaboard after August 1st, as are at the time provided with cattle quarantine stations under the control of Treasury officials.

Twenty-five hundred head of cattle passed through the Denver Stock Yards last week. Two thousand of these were stock cattle in transit to their grazing grounds in the North-west.

There is a universal complaint among cattle raisers in New Mexico this season about the shortage of the calf crop.

The Prairie cattle company of Edinburgh, Scotland, have started a drive of 40,000 head of cattle from their ranch in New Mexico for Montana.

An exchange says: "Florida is the unhappy possessor of 320,000 hogs which the assessors say are worth \$300,000. To keep these \$100,000 of fields and gardens, some \$7,000,000 worth of fences are required or \$23,400 worth of fencing for each dollar's worth of hog. Repairing these fences requires an outlay of \$1,500,000 annually or \$400 per hog."

The French Minister of agriculture has submitted a bill to the Cabinet Council raising a import duty on oxen to 25 francs, on bulls and calves 4 francs, and sheep to 3 francs.

HOGS—This market has been very strong all through the week and especially for York hogs, the demand for these continuing strong and no difficulty was found in selling out each day at very strong prices. Really choice heavies have only sold in a limited way, but the bulk of the week's trade was in lights and medium weights. Packers at all leading points have been buying little, a great many of the largest establishments being closed and the only demand in this market came from a Cincinnati house, all the local packers having withdrawn. On the opening day a brisk demand was had for light hogs, and the supply being small rates were advanced a little, the range paid being from \$4.50 to \$5.00, while common to good packing brought \$5.50 to \$6.00 and pigs \$5.00 to \$5.50. Thursday another advance was made and the pens were cleared at an early hour. Yorkers selling largely at \$5.50 to \$6.00, and Baltimore \$5.75, butchers \$5.50 to \$6.00 for light to medium weights, and a few packers grades \$5.25 to \$5.50, pigs bringing \$5.00 to \$5.50. On Friday the market was quiet and steady for light and medium weights at \$5.50 to \$6.00, but of sales at \$5.50 to \$6.00, other grades unchanged; later the market became easier in feeling, but the hogs were all sold. Saturday supply small and the demand moderate. York hogs again sold freely and if anything were steady at \$5.50 to \$6.00, butchers \$5.50 to \$6.00, and mixed packing \$5.50 to \$6.00, pigs bringing \$5.00 to \$5.50. On Monday the market was still and rates easier, demand light. Yorkers \$5.50 to \$6.00, butchers \$5.50 to \$6.00 and packing \$5.50 to \$6.00.

Market-to-day active and higher, the demand was principally for light and heavy Yorkers which sold in large numbers at \$5.50 to \$6.00; bulk of sales at \$5.75; packing grades \$5.25 to \$5.50 and medium weight butchers sold in a small way at \$5.50 to \$6.00. Pigs for shipment brought \$5.00 to \$5.50.

SHEEP—This market has ruled very dull, unsettled and irregular, with rates decidedly off from those current last week. There was no life to the demand and none but very choice sheep and lambs were salable at anything like decent prices. Arrivals consisted almost wholly of common thin stuff for which there was no demand. Quotations as revised were \$3.00 to \$3.50 for good to choice, \$2.50 to \$3.00 for fair to medium, and common \$2.00 to \$2.50.

MULES.—The horse market ruled slow for the week ended. Offerings were small. While the demand was limited and was almost wholly of horses over 2000 head, and stock cattle in transit to their grazing grounds in the North-west.

Heavy draught, extra, \$1500 to \$2000. Heavy draught, good, \$1200 to \$1500. Saddle horses, extra, \$1000 to \$1200. Saddle horses, good, \$800 to \$1000. Cattle, heavy, \$1000 to \$1200. Cattle, light, \$800 to \$1000. Pigs, \$500 to \$800.

14 hands, 4 to 8 years old, \$1200 to \$1500. 14 hands, 4 to 8 years old, \$1000 to \$1200. 14 hands, 4 to 8 years old, \$800 to \$1000. 14 hands, 4 to 8 years old, \$600 to \$800. 14 hands, 4 to 8 years old, \$400 to \$600.

GENERAL MARKET. OATS—Received into elevators during week 120,000 bu. Withdrawn 17,245 bu. Futures closed firm, but the demand exceeded selling offers. July sold at 24¢, and August 24¢, August was offered early at 24¢, and September at 25¢, but later 24¢ was bid for the former, and 25¢ for the latter. May bid 20¢. Cash was stronger, but unchanged, No. 2 selling at 27¢, No. 3, rejected 26¢, and no grade 22¢.

WHEAT—Received into elevators during week 612,474 bu. Withdrawn 307,000 bu. As usual the speculative market was generally quiet, although at times there was considerable buying for hogs and prices fluctuated to a great extent. The close was marked by a bullish feeling and prices advanced. Early in the week there was a short period of weakness, but a recovery was had and the close was at 48¢, July selling at 48¢, No. 2, rejected 47¢, No. 3, rejected 46¢, No. 4, rejected 45¢, No. 5, rejected 44¢, No. 6, rejected 43¢, No. 7, rejected 42¢, No. 8, rejected 41¢, No. 9, rejected 40¢, No. 10, rejected 39¢, No. 11, rejected 38¢, No. 12, rejected 37¢, No. 13, rejected 36¢, No. 14, rejected 35¢, No. 15, rejected 34¢, No. 16, rejected 33¢, No. 17, rejected 32¢, No. 18, rejected 31¢, No. 19, rejected 30¢, No. 20, rejected 29¢, No. 21, rejected 28¢, No. 22, rejected 27¢, No. 23, rejected 26¢, No. 24, rejected 25¢, No. 25, rejected 24¢, No. 26, rejected 23¢, No. 27, rejected 22¢, No. 28, rejected 21¢, No. 29, rejected 20¢, No. 30, rejected 19¢, No. 31, rejected 18¢, No. 32, rejected 17¢, No. 33, rejected 16¢, No. 34, rejected 15¢, No. 35, rejected 14¢, No. 36, rejected 13¢, No. 37, rejected 12¢, No. 38, rejected 11¢, No. 39, rejected 10¢, No. 40, rejected 9¢, No. 41, rejected 8¢, No. 42, rejected 7¢, No. 43, rejected 6¢, No. 44, rejected 5¢, No. 45, rejected 4¢, No. 46, rejected 3¢, No. 47, rejected 2¢, No. 48, rejected 1¢, No. 49, rejected 0¢, No. 50, rejected 0¢.

CORN—Received into elevators during week 150,000 bu. Withdrawn 77,000 bu. The strength of the market was shown in wheat and corn. The market for corn was generally quiet, but the demand exceeded selling offers. July sold at 24¢, and August 24¢, August was offered early at 24¢, and September at 25¢, but later 24¢ was bid for the former, and 25¢ for the latter. May bid 20¢. Cash was stronger, but unchanged, No. 2 selling at 27¢, No. 3, rejected 26¢, and no grade 22¢.

FLOUR—This market has been generally quiet with some few but not very marked changes in values. Old flour has given place to new, the receipts being very largely made up of the latter, and trading being confined to the best grades. Quotations are entirely for new, old being held 10 to 20¢ higher. We quote: Superfine and X nominal, xx \$6.00 to \$6.25, xxx \$6.25 to \$6.50, family \$6.50 to \$6.75, choice \$6.75 to \$7.00, fancy \$7.00 to \$7.25, extra \$7.25 to \$7.50, No. 1 \$7.50 to \$7.75, No. 2 \$7.75 to \$8.00, No. 3 \$8.00 to \$8.25, No. 4 \$8.25 to \$8.50, No. 5 \$8.50 to \$8.75, No. 6 \$8.75 to \$9.00, No. 7 \$9.00 to \$9.25, No. 8 \$9.25 to \$9.50, No. 9 \$9.50 to \$9.75, No. 10 \$9.75 to \$10.00, No. 11 \$10.00 to \$10.25, No. 12 \$10.25 to \$10.50, No. 13 \$10.50 to \$10.75, No. 14 \$10.75 to \$11.00, No. 15 \$11.00 to \$11.25, No. 16 \$11.25 to \$11.50, No. 17 \$11.50 to \$11.75, No. 18 \$11.75 to \$12.00, No. 19 \$12.00 to \$12.25, No. 20 \$12.25 to \$12.50, No. 21 \$12.50 to \$12.75, No. 22 \$12.75 to \$13.00, No. 23 \$13.00 to \$13.25, No. 24 \$13.25 to \$13.50, No. 25 \$13.50 to \$13.75, No. 26 \$13.75 to \$14.00, No. 27 \$14.00 to \$14.25, No. 28 \$14.25 to \$14.50, No. 29 \$14.50 to \$14.75, No. 30 \$14.75 to \$15.00, No. 31 \$15.00 to \$15.25, No. 32 \$15.25 to \$15.50, No. 33 \$15.50 to \$15.75, No. 34 \$15.75 to \$16.00, No. 35 \$16.00 to \$16.25, No. 36 \$16.25 to \$16.50, No. 37 \$16.50 to \$16.75, No. 38 \$16.75 to \$17.00, No. 39 \$17.00 to \$17.25, No. 40 \$17.25 to \$17.50, No. 41 \$17.50 to \$17.75, No. 42 \$17.75 to \$18.00, No. 43 \$18.00 to \$18.25, No. 44 \$18.25 to \$18.50, No. 45 \$18.50 to \$18.75, No. 46 \$18.75 to \$19.00, No. 47 \$19.00 to \$19.25, No. 48 \$19.25 to \$19.50, No. 49 \$19.50 to \$19.75, No. 50 \$19.75 to \$20.00, No. 51 \$20.00 to \$20.25, No. 52 \$20.25 to \$20.50, No. 53 \$20.50 to \$20.75, No. 54 \$20.75 to \$21.00, No. 55 \$21.00 to \$21.25, No. 56 \$21.25 to \$21.50, No. 57 \$21.50 to \$21.75, No. 58 \$21.75 to \$22.00, No. 59 \$22.00 to \$22.25, No. 60 \$22.25 to \$22.50, No. 61 \$22.50 to \$22.75, No. 62 \$22.75 to \$23.00, No. 63 \$23.00 to \$23.25, No. 64 \$23.25 to \$23.50, No. 65 \$23.50 to \$23.75, No. 66 \$23.75 to \$24.00, No. 67 \$24.00 to \$24.25, No. 68 \$24.25 to \$24.50, No. 69 \$24.50 to \$24.75, No. 70 \$24.75 to \$25.00, No. 71 \$25.00 to \$25.25, No. 72 \$25.25 to \$25.50, No. 73 \$25.50 to \$25.75, No. 74 \$25.75 to \$26.00, No. 75 \$26.00 to \$26.25, No. 76 \$26.25 to \$26.50, No. 77 \$26.50 to \$26.75, No. 78 \$26.75 to \$27.00, No. 79 \$27.00 to \$27.25, No. 80 \$27.25 to \$27.50, No. 81 \$27.50 to \$27.75, No. 82 \$27.75 to \$28.00, No. 83 \$28.00 to \$28.25, No. 84 \$28.25 to \$28.50, No. 85 \$28.50 to \$28.75, No. 86 \$28.75 to \$29.00, No. 87 \$29.00 to \$29.25, No. 88 \$29.25 to \$29.50, No. 89 \$29.50 to \$29.75, No. 90 \$29.75 to \$30.00, No. 91 \$30.00 to \$30.25, No. 92 \$30.25 to \$30.50, No. 93 \$30.50 to \$30.75, No. 94 \$30.75 to \$31.00, No. 95 \$31.00 to \$31.25, No. 96 \$31.25 to \$31.50, No. 97 \$31.50 to \$31.75, No. 98 \$31.75 to \$32.00, No. 99 \$32.00 to \$32.25, No. 100 \$32.25 to \$32.50.

LIVE POULTRY—Chickens steady. With light offerings and a fair inquiry for choice stock; small young not wanted. Ducks scarce but sold. Sales: Old chickens—Cocks \$2.00 to \$2.50, hens \$1.50 to \$2.00, young—small \$1.25, medium \$1.50, large \$1.75, good to choice \$2.00 to \$2.50, fancy large \$2.50 to \$3.00, young ducks \$2.00 to \$2.50. GAME—In light request and steady. We quote: Woodcock \$4; wood duck \$2; snipe \$2.

VEALS—Unchanged. Choice milk-fed at 8¢, 9¢, 10¢, to good to 7¢, heretics and poor 5¢. DRIED FRUIT—Quiet; nominal in price. Peaches at from 5¢ to 6¢, latter for prime halves, and apples at 10¢ to 30¢; berries, etc., less.

WAY—Very little coming in, owing to the wet weather. Demand very light, however, and the little sold went at steady rates. Sales: E. tri-2 cars prime to choice mixed in warehouse at \$5.00 to \$5.25, on truck at \$5.10, choice clover mixed at \$1.50; this side—2 cars clover-mixed at \$1.10, 1 car new prairie at \$1.50, 3 choice do. at \$1.50.

BUTTER—Trade continues light, quotations unchanged, yet the feeling was strengthening and tending up on choice grades of both creamery and dairy. No improvement to market for inferior lots—medium, dairy and off creamery in plentiful supply and very dull. Choice stock quiet. We quote: Creamery—Fancy 30¢, fair and gathered cream 17¢ to 18¢, overhauled less. Dairy—Choice 13¢ to 14¢, fancy selections 15¢ to 16¢, failing off stock (heated, light colored or streaked, milky, soft or oily, etc.) at 7¢ to 9¢, low 4¢ to 5¢. Lots in pairs, and country, at from 4¢ to 10¢. Grease butter 3¢ to 4¢, sales 10¢ to 15¢ on 11, 10 creamery at 17¢.

ELGIN, Ill., July 28.—Butter took a sudden jump to-day, owing to increased Eastern demand for fancy creameries; 21¢ to 22¢, was paid on the board of trade. Bulk of sales at 22¢ to 23¢, 20 pounds reported sold, and 8,748 boxes cheese, part skim, brought 95¢ to 96¢. The price of butter can hardly be held.

CHEESE—Full cream at 7¢ for fair to 10¢ for choice, latter firm; prime part skin 8¢, inferior 6¢ to 10¢.

EGGS—Received 488 pkgs. In excessive supply, light demand and easy. Current receipts of fresh at 8¢ to 9¢ in lots, candled at 10 to 12¢; no price quotable on stale, partially damaged, etc.

GRASS SEEDS—Offerings light; no demand apparently. Prices nominal. German millet 50¢ to 55¢; poorer do 50¢ for low to 40¢ for fair; Hungarian 40¢ to 50¢; common millet 35¢ to 45¢; red-top 30¢ to 40¢; timothy 15¢ to 20¢; clover 15¢ to 20¢; timothy for August delivery nominal at 15¢ to 20¢.

CASTOR BEANS—Declining, nominally. Only \$2 bid for prime. FLAXSEED—Lower and drooping. Sales: 2 car lots Saturday on V. & T. 2 cars, 2 cars yesterday at \$1.35; at close best bid was \$1.30; August sale at \$1.25.

RAPE SEED—Steady but quiet at \$1.80 to \$2.00. NEW APPLE—Quiet; boxed fruit dull and lower. We quote good to choice in bins at \$1.50 to \$2.00; boxes at \$2.00 to \$2.50 per 100 lbs. measure. Sales: 12 bins green at \$2.75.

PEACHES—Prices stronger on choice to fancy fruit, of which the supply was inadequate in demand; but poor to fair move slowly at unchanged figures. Sales at 50¢ to 60¢ per box for poor to fair; fair to good, \$1.25 to 1.50 for choice; some strictly fancy Texas Crawford and China cling sold at \$1.50 to \$2.00. PLUMS—In liberal receipt and weaker in price; consigned lots will close selling at \$1.25 to 1.50 per box for choice. Time grown Chickasaw at 75¢ case and 25¢ per box. Home-grown loose from wagons 75¢ per box for Chickasaw; 100 lbs. for wild goods at \$1.50 to \$2.00.

GRAPE—Lower; offerings usually poor in quality. Sales at 75¢ to 90¢ per box, \$1.50 to \$2.00. PEARS—Choice Bartlett salable at \$1.50 to \$2.00 per box; other varieties from 50¢ to \$1.00 per box. Time grown—Time grown (mainly common varieties) sell from \$1.75 to \$2.00 per box.

WATERMELONS—Weaker in price on increased supplies—several cars in to-day. We quote: Choice 10¢ to 12¢, butchers 8¢ to 10¢, and other small varieties 5¢ to 8¢. CANTALOUPE—Lower, receipts large, crowded the market. Sales mainly at \$1.00 to \$1.25 per crate for choice—but a great deal unsold.

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SKIN HUMORS CAN BE CURED BY GLENN'S SULPHUR SOAP.

Mr. C. N. CRITTENDEN, Dear Sir: For nearly fourteen years I have been troubled with skin humors, I have spent nearly a small fortune for doctors and medicine, but with only temporary relief. I purchased your "GLENN'S SULPHUR SOAP" nearly two years ago—used it in baths and as a toilet soap daily. My skin is now as clear as an infant's, and no one would be able to tell that I ever had a skin complaint. Yours respectfully, C. N. CRITTENDEN, San Francisco, Cal. All Druggists Sell Glenn's Sulphur Soap. German Corn Remover Kills Corns and Bunions.

Advertising Circulars I! "It has become so common to begin an article, in an elegant, interesting style, 'Then run it into some advertisement that we avoid all such.' 'And simply call attention to the merits of Hop Bitters in as plain, honest terms as possible.' 'To induce people 'To give them one trial, which so proves their value that they will never use anything else.' 'The remedy so favorably noticed in all the papers. Religious and secular, 'Having a large sale, and is supplanting all other medicines. 'The doctors doing her no good.' 'And at last was cured by this Hop Bitters the papers say so much about.' 'Indeed! Indeed! 'How thankful we should be for that medicine.' 'A Daughter's Misery. 'Eleven years our daughter suffered from a bed of misery. 'From a complication of kidney, liver, rheumatic trouble and nervous debility. 'Under the care of the best physicians, 'Who gave her disease various names, 'But no relief. 'And now she is restored to us in good health by as simple a remedy as Hop Bitters, that we had shunned for years before using it.'—THE FATHERS.

Father is Getting Well. "My daughters say: 'How much better father is since he used Hop Bitters.' 'He is getting well after his long suffering from a disease declared incurable.' 'And we are so glad that he used our Bitters.'—A LADY OF UTAH, N. Y.

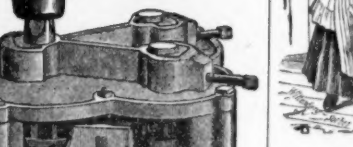
K. K. K. Keen Kane Kutter. Made especially for cutting sugar and sorgho cane. Is used on the plantations of Louisiana and Cuba. It has a crook on the back of the knife for stripping the cane before it is cut. Every sorgho grower who has seen the knife says it is just what is wanted. Those who cut the cane with these knives can save time, do the job better, and with less exertion than by using any other knife. It is made of solid cast steel and is full polished, is light and strong, and from end of blade to end of handle. Is offered as a premium only on the RURAL WORLD. And will be sent free (exclusive of express charges) to all who will send us yearly subscribers to the RURAL WORLD. Remember, the price for the RURAL WORLD is one dollar and fifty cents per year each subscription.

Sorghum Sirup Filter. For rapidly clarifying the juice of sorghum. And making light colored sirup a certainty. The smallest Filter will clarify a barrel of juice perfectly in twenty minutes. Every Filter guaranteed to do as claimed. Address, O. F. BOOMER, 47 Brooklyn Ave., Boston, Mass.

SORGHUM SUGAR MAKERS AND BREWERS. BONNABEL'S Bi-Sulphite of Lime. Established in 1851. Constantly used by all SUGAR MAKERS in Louisiana and by BREWERS all over the country. Send for circulars. My article can always be obtained from Messrs. C. Ellermeier & Co., 220 Street and Scott Ave., St. Louis, and Coolidge & Marcus, 241 Water Street, New York. H. BONNABEL, New Orleans.

THE ACME MOWERS AND Combined Mowers & Droppers. Are Guaranteed the Best Goods in the Market. Will do PERFECT WORK ON ANY GROUND WHERE A TEAM CAN TRAVEL. Are sent to any part of the country at Bottom Prices. Send for circulars and prices. A. J. CHILDS, 200 Market St., St. Louis.

CHATTANOOGA Patent Cane Mills For Animal or Steam Power. Steel Shafts and Brass Boxes.



EVAPORATORS and CHILLED PLOWS. Chattanooga Plow Co., Chattanooga, Tenn. Moline Plow Co., St. Louis. Mention this paper.

STAR CANE MILL.

The only Double Mill made in the West. Twenty different styles and sizes suited to every capacity from one-third of an acre to thirty-five acres per day. Prices ranging from \$35 to \$600.

Stubb's Evaporator.

I. A. Hedge, after testing it with others, says it is the best Evaporator made. It took the only premium awarded for work done at the St. Louis Fair in 1882. One hundred dollars would not buy my MISSOURI STEAM WASHER if I could not get another.—Mrs. Kate Ferris, Mexico. I have used one of the MISSOURI STEAM WASHERS, and it will do all the interior cleaning for it.—S. W. Henry, Company, St. Louis. The MISSOURI STEAM WASHER does all that you can do with a brush, and it will do it better. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear on the clothes, and no soap. The work of three hand washers. I have tried many, but none will wash shirts, or any kind of clothing clean, without leaving a stain, and wear on the clothes; and I don't get it out of my mind. I can't replace it.—Mrs. Ross, 2800 Gambier St., St. Louis. I have been using the MISSOURI STEAM WASHER in my laundry for eight months. It washes clean with no wear